

AMENDMENTS TO THE CLAIMS

Please cancel Claims 3, 4 and 8 as shown below.

Please amend Claims 1, 5, 6, 9 and 11 as shown below.

Please add new Claims 21-25 as shown in the following complete list of claims.

1. (Currently Amended) A method of identifying a coded test unit in a plurality of coded test units, wherein the coded test unit comprises a test moiety and a coding oligonucleotide, comprising the step of:

contacting the plurality of coded test units with a decoding oligonucleotide comprising an orthogonal nucleobase, wherein the decoding oligonucleotide is complementary to the coding oligonucleotide of the coded test unit, and wherein the plurality of coded test units are contacted under conditions in which the decoding oligonucleotide produces a detectable hybridization signal sufficient to distinguish the coded test unit from the remainder of the plurality of coded test units, whereby the coded test unit is identified from the plurality of coded test units by the production of a detectable hybridization signal in the contacting step.

2. (Previously presented) A method for decoding a plurality of coded test units comprising the steps of:

- a. identifying a first molecule in the plurality of coded test units; and
 - b. identifying a second molecule in the plurality of coded test units;
- wherein the first molecule and the second molecule are identified according to the method of Claim 1.

3.-4. (Canceled).

5. (Currently Amended) The method of Claim 1 or 2 ~~1, 2, 3 or 4~~ wherein the orthogonal nucleobase is iso-C, iso-G, K, X or H.

6. (Currently Amended) The method of Claim 1 wherein the coded test unit further comprises a solid substrate on which the coding oligonucleotide is immobilized.

7. (Previously presented) A method for decoding a plurality of coded substrates comprising the steps of:

- a. identifying a first substrate in the plurality of coded substrates; and
- b. identifying a second substrate in the plurality of coded substrates;

wherein the first substrate and the second substrate are identified according to the method of Claim 6.

8. (Canceled).

9. (Currently Amended) The method of Claim 8 6 wherein the test moiety is an oligonucleotide.

10. (Original) The method of Claim 9 wherein a single polynucleotide comprises the test moiety and the coding oligonucleotide.

11. (Currently Amended) The method of Claim 9 wherein a first polynucleotide comprises the test moiety and a second polynucleotide comprises the coding oligonucleotide and the first polynucleotide and the second polynucleotide are each independently linked to the solid substrate.

12. (Original) The method of Claim 6 wherein the plurality of coded substrates is in an array.

13.-20. (Canceled).

21. (New) The method of Claim 1 wherein the test moiety is a polypeptide.

22. (New) The method of Claim 1 wherein the test moiety is covalently linked to the coding oligonucleotide.

23. (New) The method of Claim 1 wherein the coded test unit is immobilized upon a solid substrate.

24. (New) The method of Claim 1 wherein the test moiety and coding oligonucleotide of the coded test unit identified are non-identical to the test moieties and coding oligonucleotides of the coded test units of the remainder of the plurality of coded test units.

25. (New) The method of Claim 6 wherein the test moiety and the coding oligonucleotide are each independently covalently linked to the solid substrate.